

Notice of Allowability

Application No.

09/535,045

Examiner

Kimbinh T. Nguyen

Applicant(s)

DONOVAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 05/25/05.
2. ☒ The allowed claim(s) is/are 2-4,6,7,9,13-19,25,27,31-35 and 37.
3. ☒ The drawings filed on 24 March 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This action is responsive to amendment filed 05/25/05.
2. Claims 2-4, 6, 7, 9, 13-19, 25, 27, 31-35, 37 are pending in the application.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Claim 2, the prior art does not teach a method for calculating a level of detail value, comprising: the distance value is computed based on a derivative value; wherein the geometrically arranged coordinates include (z_0, z_1, z_2, z_3) which are representative of a quadrilateral; wherein the derivative value is calculated using the expression $((z_1 - z_0) + (z_3 - z_2))/2$.

Claims 7, 9, 25, 27, the prior art does not teach a method for calculating a level of detail value, comprising: estimating a derivative value based on the geometrically arranged coordinates, wherein the geometrically arranged coordinate include (z_0, z_1, z_2, z_3) which are representative of a quadrilateral with z_0 being an upper left corner of the quadrilateral, z_1 being upper right corner of the quadrilateral, z_2 being a lower left corner of the quadrilateral, z_3 being a lower right corner of the quadrilateral; wherein the derivative with respect to an x-axis; y-axis; wherein the derivative value is calculated using the expression $((z_1 - z_0) + (z_3 - z_2))/2$.

Claims 13, 31, the prior art does not teach a method for calculating a level of detail value, comprising: computing a distance value based on the geometrically arranged coordinates; calculating a LOD value using the distance value for use during computer graphics processing; estimating a derivative value based on the geometrically

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arranged coordinates, wherein the distance value is computed based on the derivative value; wherein the LOD value is calculated for dependent textures.

Claims 14, 32, the prior art does not teach a method for calculating a level of detail value, comprising: computing a distance value based on the geometrically arranged coordinates; calculating a LOD value using the distance value for use during computer graphics processing; wherein the LOD value is calculated for cube environment mapping which involves calculating a vector, and using the vector to index into a $\sin(\text{latitude})/\text{longitude}$ map.

Claims 15, 33, the prior art does not teach a method for calculating a level of detail value, comprising: computing a distance value based on the geometrically arranged coordinates; calculating a LOD value using the distance value for use during computer graphics processing; determining if the geometrically arranged coordinates reside on separate sides of a cube map; performing a coordinate space transform if the geometrically arranged coordinates reside on a separate sides of the cube map.

Claims 16, 34, the prior art does not teach a method for calculating a level of detail value, comprising: computing a distance value based on the geometrically arranged coordinates; calculating a LOD value using the distance value for use during computer graphics processing; determining if a q-value of a pixel associated with each coordinate is the same.

Claim 18, the prior art does not teach a method for calculating a level of detail value, comprising: computing a distance value based on the geometrically arranged coordinates; calculating a LOD value using the distance value for use during computer

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graphics processing; transforming the geometrically arranged coordinates to a different coordinate system (l,m,n), wherein the distance value is estimated using an expression selected from the group of the claimed equation.

Claims 19 and 37 are allowed as the same reasons set forth in claims 7 and 18 above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh T. Nguyen whose telephone number is (571) 272-7644. The examiner can normally be reached on Monday to Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Friday from 7:00 AM to 3:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached at (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 18, 2005

A handwritten signature in black ink, appearing to read "Kimbinh T. Nguyen". The signature is fluid and cursive, with the first name "Kimbinh" and last name "Nguyen" clearly distinguishable.

KIMBINH T. NGUYEN
PRIMARY EXAMINER